

## New Micro-lepidoptera.

BY HENRY ENGEL, Merrick Museum, New Brighton, Pa.

The species of Microlepidoptera described herewith are part of a large number of species sent to Mr. Busck last winter for determination.

After studying this material Mr. Busck pronounced these and several other species new and suggested that I describe them.

My limited experience with the generic study of Microlepidoptera precluded the possibility of my giving them their proper position and I gladly accepted the kind offer of Mr. Busck to give me notes on, and generic determinations of these species.

The diagnosis of the new genus *Synallagma* was prepared by Mr. Busck. I gratefully acknowledge my obligation to him for determining several hundred species of Microlepidoptera for me.

### *Depressaria flavicomella* n. sp. .

Antennæ light ochereous. Labial palpi straw-yellow. On the basal half of the second joint a few brownish scales are intermixed outwardly. Face and head cream color. Thorax pale yellow. Forewing straw-yellow, with sulphurous hue. Base of wing concolorous with thorax. A diffuse rusty clouding over basal part of wing along dorsal margin, and almost to costa. An inwardly oblique brown shade from the outer discal spot to the dorsal suffusion. Outer discal spot centered with white bordered with blackish outwardly. Inner discal spot small and black. Discal and apical area sparsely obscured by brownish scales. Along the costa is a series of brown spots, becoming more pronounced on the apical half of the wing. A row of brown spots along outer margin. Cilia concolorous with ground color. Hind wing silvery white slightly darkened in apical region. A faint interrupted line at base of cilia. Cilia silver white. Forewing beneath dark ochereous, costa marked with pale yellow. Hindwing silvery white. Abdomen pale yellow with two lateral brown lines on under side. Legs silver gray.

Expanse, 15-16 mm.

Hab.—New Brighton, Pa., June 12-27 (Merrick), Oak Station, Pa. (Marloff).

Type No. 10,284, U. S. National Museum. Cotypes in the Merrick Museum, New Brighton, Pa.

This species is allied to *Depressaria senicionella*, Busck. Mr. Busck kindly loaned me a cotype of it for comparison. The pale

yellow forewings, silvery hind wings, and smaller size easily separate it from *senicionella*.

I have before me 22 specimens, all taken at light in a dense forest during June, 1904-1906. Although I have found nearly all the local species hibernating, the only records for this species are in June.

**Elaschista albicapitella** n. sp.

Antennæ dark brown, gray near tip. Labial palpi silvery white, second joint fuscous beneath. Face silvery white. Collar and thorax a rich dark brown with purplish reflections. Lower edge of patagia and posterior edge of thorax white. Forewing elongate, width of the wing one-third of its length, apex produced. Ground color dark brown. Base of wing yellowish white. A prominent silver white fascia two-fifths from base of wing, extending from costa to dorsal margin, slightly bent outward over cell then straight to dorsal margin. A silver white fascia one-fifth from apex, outwardly oblique, nearly to center of wing. A triangular silvery white spot on dorsal margin, three-fourths from the base, outwardly oblique. Cilia dark gray sprinkled with brown. Hind wing dark fuscous, cilia dark gray. Abdomen dark brown above, pale yellow beneath. Legs brown above, whitish beneath. Underside of forewing blackish, with the outer fascia indicated on costa. Underside of hind wing same as upper side.

Expanse, 8 mm.

Hab.—Pittsburgh, Pa., June 12-17 (Engel).

Type. No. 10,285, U. S. National Museum. Cotypes in the Merrick Museum, New Brighton, Pa.

This species is nearest to the European *Elachista albifrontella*, Hubner, from which it differs in the darker ground of the front wings, the white patagia and the white base of the forewings. The inner fascia is also quite a contrasting difference. An authentic specimen of *albifrontella* was loaned to me by Mr. Busck for comparison.

**SYNALLAGMA** n. gen.

Head smooth. Labial palpi long, recurved, smooth; terminal joint shorter than second joint, acute. Max. palpi obsolete. Antennæ with basal joint elongate. Forewing elongate lanceolate, with tip produced and hooked downward. 11 veins, vein 11 absent; 7 and 8 stalked to costa; 6 into hooked apex; 1b strongly furcate at base. Hindwing lanceolate, half as wide as forewing. 8 veins, 3 and 4 connate, cell open between 4 and 5, 6 and 7 connate; 7 separate. Posterior tibiae above with short hairs.

Type of genus *Synallagma busckiella* (Engel).

**Synallagma busckiella** n. sp.

Antennæ dark gray annulated with silver gray rings, basal joint thickened with scales. Face silver gray, head and thorax covered with flattened scales with coppery green luster. Labial palpi cream color, second joint fuscous beneath, terminal joint with dark line outwardly, tip cream white. Forewing light brown, with strong metallic reflections. A longitudinal cream white line from the base through middle of wing ending in the cell. Beneath terminal of this line a narrow line of like color commences and runs slightly divergent outwardly to the fold. A narrow line of about two-thirds the wing length on the fold near the inner angle. A few bluish black spots at lower end of cell edged with silvery scales. A black ocellus at the apex at beginning of the produced tip. On the costa above the ocelli is a cream white patch divided by a brown fascia. Cilia along termen dark gray, on the curved tip of apex the cilia are short and whitish. Hind wing dark gray with a silvery luster. Cilia concolorous. On the under side both wings are ocherous without any markings. Abdomen gray with coppery reflections above, silver gray beneath. Legs silver gray marked with fuscous above. Expanse, 9-10 mm.

Hab.—Pittsburgh, Pa., June 28, July 18, August 17, Sept. 29 (Engel), Oak Station, Pa. (Marloff).

Type No. 10,286, U. S. National Museum. Cotypes in the Merrick Museum, New Brighton, Pa.

I take pleasure in naming this interesting species in honor of Mr August Busck.

**Gracilaria pennsylvaniella** n. sp.

Antennæ as long as forewing, light brown with narrow gray annulation. Labial palpi silver white, terminal joint shaded with brown. Face and head silver white, with central indistinct golden line to collar. Collar and thorax golden brown with a silvery line above patagia. Ground and forewing golden brown. Along the costa are four silvery fasciæ edged with black, situated as follows: The first one a trifle more than one-fourth from base, outwardly oblique, nearly to middle of wing, curved toward costa. Second fascia a little beyond middle of costa, outwardly oblique, to middle of wing, curved toward costa. Third fascia is short one-fourth from apex, outwardly oblique. The fourth at the beginning of the costal cilia is short, inwardly oblique. A subbasal silvery streak from the dorsal margin reaching the fold one-fourth from base. An outwardly oblique silvery streak from middle of dorsal margin to fold. A second dorsal streak near inner angle to fold ending near the third costal fascia, edged strongly with brown scales at the point. On the middle of the wing, at apical fourth, is a cluster of bright golden scales, a blackish spot centered with silver just below the apex. Cilia along apical curve white, becoming dark

gray along dorsal edge. Hindwing blackish brown, cilia dark gray. Abdomen gray, anal segment white. Legs white with brown shadings, and brown annulations on tarsal joint.

Expanse, 8-8.5 mm.

Hab.—Pittsburgh, Pa., May 14-27, August 11, October 5 (Engel), Oak Station, Pa. (Marloff).

Type No. 10,287, U. S. National Museum. Cotypes in Merrick Museum, New Brighton, Pa.

This species is near *Gracilaria lespedezaefoliella* Clem., but the larger size, bolder ornamentation, and the comparatively long basal streak separate it from that species.

***Tinagma crenulellum* n. sp.**

Antennæ gray, annulated with ocherous. Labial palpi and head whitish gray. Forewing ocherous strongly dusted with white, giving a speckled appearance to the wing. A broad dark ocherous fascia on the middle of the wing of equal width on costal and dorsal edge. This fascia is poorly defined basally, but distinctly edged with white outwardly. A pale gray shade crosses the wing beyond this central fascia extending nearly to the apex. Apical part of wing dusted ocherous, cilia coarsely speckled with dark brown and white. Hind wings ocherous, cilia smoky gray. Abdomen ocherous. Legs grayish.

Expanse, 8.5-9.5 mm.

Hab.—Pittsburgh, Pa., May 27-31, 1906, (Engel), New Hampshire.

The latter record was reported by Mr. Busck who received this species from New Hampshire since he had my material for study.

Type in the U. S. Nat'l. Museum. Cotypes in the Merrick Museum, New Brighton, Pa. This species is very close to, if distinct from, the European *Tinagma perdicellum* Zeller. It seems advisable to keep it under a separate name until the identity shall eventually be proven by the breeding of both species. The American species has the labial palpi and head whitish, not ocherous, as in the European species, and the central fascia of the forewing has a different angle, more perpendicular not inwardly inclined on dorsal edge as in *perdicellum*. These differences alone would hardly justify the separation of the American form, but it is easier to prove the two forms synonyms than to disprove the faulty record of the European species here.